

RUWENZORI EXPEDITION REPORTS.

10. DIPTERA.

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[PLATE III.*]

THE Diptera brought home by the Ruwenzori Expedition were not numerous, consisting of only eighteen specimens, belonging to six families and thirteen species. Seeing that the Diptera of Central Africa have as yet scarcely been collected at all, it is not surprising to find that a large proportion (no fewer than eight, or 61·5 per cent.) of these species prove to be new. One of the new species was recently described by Miss Gertrude Ricardo, but descriptions of the remaining seven will be found in the following pages.

In order to make the present contribution as complete as possible a few Diptera obtained by Mr. G. F. Scott Elliot during a previous visit to Ruwenzori have been studied in conjunction with those captured by the Ruwenzori Expedition. Mr. Scott Elliot's material belongs to six species, five of which are apparently new; and, since three of the latter are additional to the species brought back by the Ruwenzori Expedition, the total number of new species described below is ten.

The Diptera procured by the Ruwenzori Expedition were collected by the Hon. Gerald Legge and Mr. A. F. R. Wollaston.

Family TABANIDÆ.

Subfamily TABANINÆ.

HÆMATOPOTA Mg.

Hematopota Meigen, Illiger's Magazin für Insektenkunde, Bd. ii. 1803, p. 267.

HÆMATOPOTA PULCHRITHORAX Austen.

Second Report of the Wellcome Research Laboratories, Gordon Memorial College, Khartoum, 1906, p. 54, pl. v.

2 ♀ ♀. Mokia, S.E. Ruwenzori, 3500 ft., 18th May.

* For explanation of the Plate, see p. 102.

TABANUS Linn.

Tabanus Linnæus, Fauna Suecica, ed. ii., 1761, p. 462.

TABANUS FASCIATUS Fabr.

Systema Entomologiæ, 1775, p. 788.

1 ♀. Below Basoko, Congo River, 1400 ft., November.

TABANUS RUWENZORII Ricardo. (Plate III. fig. 1.)

Annals & Magazine of Natural History, ser. 8, vol. i., April 1908, p. 332.

2 ♀ ♀. Mubuku Valley, E. Ruwenzori, 5000–13,000 ft., 22nd Jan. and 2nd Feb.

Family BOMBYLIIDÆ.

Subfamily BOMBYLINÆ.

BOMBYLIUS Linn.

Bombylius Linnaeus, Fauna Suecica, ed. ii., 1761, p. 471.

BOMBYLIUS sp. (No. 1.)

♂, ♀. Mubuku Valley, E. Ruwenzori, 6000–13,000 ft., 29th Jan.; and Mokia, S.E. Ruwenzori, 3500 ft., 31st Jan.

BOMBYLIUS sp. (No. 2.)

1 ♀. Mubuku Valley, E. Ruwenzori, 5000–7000 ft., 30th Jan.

The specimens of both of these species of *Bombylius* are so much damaged as to render it hopeless either to identify or describe them.

Family ASILIDÆ.

Subfamily LAPHRIINÆ.

PROAGONISTES* Lw.

Proagonistes Loew, Öfv. af K. Vetensk.-Akad. Förhandl. 1857, p. 367; 'Die Dipteren-Fauna Südafrika's,' 1860, p. 170 (Abhandl. des Naturwiss. Vereins für Sachsen u. Thüringen, Bd. ii. p. 242).

* This genus, founded for *Proagonistes validus* Lw., from Caffraria, was placed among the Asilinae by its author, though the latter at the same time suggested that its proper place might be among the Laphriinae, it being impossible to decide the question with certainty, since the third joint of the antenna was missing in the case of Loew's type. The specimens belonging to the genus in the British Museum (Natural History) are for the most part in better condition, and show that *Proagonistes* should be assigned to the Laphriinae. The following species, referred to by Loew in his original description, also belong to *Proagonistes*: *Laphria rufibarbis* Fabr. (called "*rufipes*" by Loew, Öfv. af K. Vetensk.-Akad. Förhandl. 1857, p. 367), W. Africa; *L. ufens* Walk., Sierra Leone; and *L. præceps* Walk., Natal. Besides these, the Museum collection includes two or three specimens, apparently belonging to species of this genus at present undescribed, and among others an example of a very large species, with exceedingly long hind legs, from Madagascar.

PROAGONISTES PRÆDO, sp. n. (Plate III. fig. 2.)

♂.—Length (1 specimen) 27 mm.; width of head 6.2 mm.; width of front at vertex 1.6 mm.; length of wing 24 mm.

Black; dorsum of thorax in type chiefly dull, scutellum and dorsum of abdomen moderately shining and purplish-black; dorsum of thorax with a ferruginous stripe along each side, including humeral callus and extending beyond suture; wings dark brown with a purplish tinge, central portion of second, third, fourth, and fifth posterior cells, and of axillary cell, and upper margin of second basal cell paler; upper surface of front and middle femora and distal third (below not more than distal fourth) of hind femora black, under side of front and middle femora and proximal two-thirds or three-fourths of hind femora burnt-sienna coloured; tibiæ orange-rufous, tarsi, especially front pair, somewhat darker, hind tibiæ with a dark brown spot above at extreme tips, last three joints of front and middle tarsi each with a small black spot below.*

Head shining black, with a roughly semicircular ferruginous spot on each side of the prominent facial tubercle, which bears a conspicuous tuft of long and coarse orange-rufous hair; front, sides of face, and occipital region clothed with similarly coloured hair, beard yellowish white; anterior ocellus in case of type small but distinct; first and second joints of antennæ orange-rufous, clothed with similarly coloured hair and bristles, second joint also with some black hairs, third joint mummy-brown, elongate ovate when viewed from the side; palpi shining black, clothed at tips with orange-rufous hair; tip of proboscis clothed above with chrome-yellow hair. Thorax: hairs and bristles on dorsum and scutellum black, lateral ferruginous stripes clothed with orange-rufous hair, the long bristles on the posterior two-thirds of each stripe also orange-rufous; pleuræ clothed mainly with black hairs, but with a few yellowish-white hairs above each coxa. Abdomen clothed above with short black hairs, on sides and below with longer black hair; genitalia burnt-sienna coloured, clothed at tips with orange-buff hair. Wings: second submarginal cell commencing just beyond level of end of discal cell, long, and its proximal two-thirds narrow. Halteres ochraceous-buff. Legs: front and middle coxæ clothed with yellowish-white, hind coxæ with black hairs; front and middle femora clothed above with black hairs, below and on each side with long and fine hairs, tending to curl at tips, and for most part yellowish on basal, black on distal half of femora; tips of middle and hind femora above and of front femora on each side clothed with orange-rufous hair; spines or stout bristles towards tips of middle and hind femora ferruginous; hind femora clothed mainly with black hair, long and fine on sides and below; hair on tibiæ and tarsi ochraceous, spines ferruginous; first joint of hind tarsi long and not incrassate; basal half or basal third of claws ferruginous, remainder black.

Hab. Mubuku Valley, E. Ruwenzori, 6000–7000 ft., 5th Feb.

* For names and illustrations of colours, see Ridgway, 'A Nomenclature of Colors for Naturalists' (Boston: Little, Brown, & Company, 1886).

The lateral ferruginous stripes on the dorsum of the thorax will suffice to distinguish *P. prædo* from the other species of the genus previously described.

Family SYRPHIDÆ.

Subfamily SYRPHINÆ.

SYRPHUS Fabr.

Syrphus Fabricius, *Systema Entomologiæ*, 1775, p. 762.

SYRPHUS ADLIGATUS Wied. (Plate III. fig. 3.)

Syrphus adligatus Wiedemann, *Analecta Entomologica*, 1824, p. 35; *Aussereuropäische zweiflügelige Insekten*, ii. 1830, p. 122.

2 ♂♂. Ruwenzori, 6000–8000 ft. (*G. F. Scott Elliot*).

ASARCINA Macq.

Asarkina Macquart, *Mémoires de la Société royale des Sciences, de l'Agriculture et des Arts, de Lille*, 1842, p. 137; '*Diptères Exotiques*,' ii. 2, 1842, p. 77.

ASARCINA AMÆNA, sp. n. (Plate III. fig. 4.)

♂, ♀.—Length (2 specimens) 11·6 mm. (♂), 12 mm. (♀); width of head 3·6 mm. (♂), 3·8 mm. (♀); width of front at vertex in ♀ 0·5 mm.; length of wing 10·5 mm. (♂), 11·4 mm. (♀).

Face conical. Agreeing with A. rostrata Wied. in general coloration, but black transverse bands on abdomen deeper; distinguished from both A. rostrata Wied. and A. eremophila Lw. by having no median black stripe on face; a dark brown semi-circular mark above front edge of buccal cavity; third joint of antennæ dark brown, except lower basal angle; wings longer than in A. rostrata Wied., moderately infuscated, colour not intensified at certain spots, first and second costal cells not darker than remainder of surface.

Head saffron-yellow, upper half of front in ♀ bronze-black; vertical and frontal triangles in ♂ and front in ♀ clothed with black hair, face and occipital region clothed with chrome-yellow hair, basi-occipital margin clothed with silvery hair; first joint of *antennæ* ochraceous-buff, second joint cinnamon-rufous, both joints stout, clothed with black hair, approximately equal in length in ♂, first joint in ♀ about one-third longer than second; arista clove-brown. *Thorax*: dorsum, except lateral stripe and scutellum, shining bronze-black, lateral stripe and scutellum gamboge-yellow, scutellum clothed with black, remainder of thorax with yellow hair; pleuræ and pectus yellowish pollinose on a bronze-black ground, some yellow patches clothed with long chrome-yellow hair beneath base of wing. *Abdomen* saffron-yellow; dorsum

with four fairly deep transverse black bands, each of middle two of which is in ♂ narrowly connected with foregoing band on each side; these bands occupy hinder portion of second and three following segments, and each of first three bands also encroaches slightly on following segment; there is also a semicircular black median area on first segment, posterior margin of which extends over on to second segment, on which it is connected by a median black longitudinal mark with first black transverse band; in ♀, yellow band on third segment is slightly constricted in middle; dorsum of abdomen, except basal angles, clothed with black hair, basal angles clothed with chrome-yellow hair; venter yellow and clothed with pale chrome-yellow hair, lateral extremities of second and third dorsal black bands more or less visible; genitalia of ♂ orange-buff, pollinose, and clothed with pale chrome-yellow hair. *Wings* brownish, *stigma* russet; bend of third longitudinal vein above first posterior cell shallow but fairly sharp. *Halteres* yellow. *Legs* orange-buff, tarsi dark brown, hind femora and tibiae in ♂ brownish.

Hab. Ruwenzori: ♂, Mubuku Valley, E. Ruwenzori, 5000-7000 ft., 15th Jan.; ♀, Ruwenzori, 7000-8000 ft. (*G. F. Scott Elliot*).

ASARCINA PUNCTIFRONS, sp. n. (Plate III. fig. 5.)

♂.—Length (1 specimen) 12.5 mm.; width of head 4 mm.; length of wing 12.5 mm.

Face conical. Agreeing with A. rostrata Wied. in general coloration, but black transverse bands on abdomen deeper; a relatively large clove-brown median spot on frontal triangle above base of antennæ; facial tubercle in type reddish brown, but (at any rate in type) no distinct median black stripe on face, and no dark brown semi-circular mark above front edge of buccal cavity; first and second joints of antennæ stout, first joint barely one-fourth longer than second, lower margin of third joint ochraceous-rufous; second segment of abdomen with a very narrow median black longitudinal stripe; yellow bands on third and following segments not constricted in middle; wings strongly infuscated, the colour somewhat intensified at certain spots, such as distal extremity of second longitudinal vein; first and second costal cells darker than remainder of wing except stigma.

Head deep saffron-yellow, frontal triangle clothed with black hair, face with saffron-yellow hair; occipital margin clothed above with pale yellow, on sides and below with silvery hair; first and second joints of antennæ cinnamon-rufous, third joint, except extreme base and lower margin, dark brown, arista dark brown. *Thorax* as in *A. amæna* Austen. *Abdomen* also as in foregoing species, except that median black stripe on dorsum of second segment is longer and more attenuated, while (at least in case of type) yellow band on third segment shows no trace of median constriction. *Wings* bistre, with lighter and darker regions; depression of third longitudinal vein above first posterior cell merely a very gentle undulation rather than a bend. *Halteres*

yellow. *Legs* tawny, hind tibiæ brownish, tarsi dark brown, hind femora with a dark brown streak on outer side, broader on basal half.

Hab. Ruwenzori, 7000–8000 ft. (*G. F. Scott Elliot*).

Asarcina punctifrons is distinguished from *A. rostrata* Wied. and *A. eremophila* Lw. *inter alia* by the shorter and stouter first joint of the antennæ, and by the first and second black transverse bands on the abdomen being entirely parallel, and not in the least expanded in the middle; from *A. amœna* Austen, the new species may at once be distinguished by the strongly infuscated wings and the presence of the dark frontal spot.

Subfamily ERISTALINÆ.

SENASPIS Macq.

Senaspis Macquart, Mémoires de la Société Nationale des Sciences, de l'Agriculture et des Arts, de Lille, 1849 (Lille: 1850), p. 437; Diptères Exotiques, 4^e Supplément, 1850, p. 133.

Plagiocera Loew (nec Macquart), Öfv. af K. Vet.-Akad. Förhandl. 1857, p. 381; 'Die Dipteren-Fauna Südafrika's,' p. 317 [389] (1860).

SENASPIS ÆSACUS Walk. (Plate III. fig. 6.)

Helophilus æsacus Walker, 'List of the Specimens of Dipterous Insects in the Collection of the British Museum,' part iii. 1849, p. 609.

Plagiocera maculipennis Lw. Öfv. af K. Vet.-Akad. Förhandl. 1857, *loc. cit.*; 'Die Dipteren-Fauna Südafrika's,' *loc. cit.*

(?) *Eristalis latevittatus* Bigot, 'Archives Entomologiques,' ii. 1858, p. 365, pl. x. fig. 9.

1 ♀, between Salt Lake and Wawamba Country, Ruwenzori district (*G. F. Scott Elliot*). Specimens of this species from Busoga, Uganda, March (*Dr. Aubrey Hodges*), and Entebbe, Uganda, June, "taken in Laboratory" (*Captain E. D. W. Greig, I.M.S.*), are also in the Museum collection, which includes other examples from Ashanti and Sierra Leone, showing that *S. æsacus* has a very wide distribution in Tropical Africa. If *Eristalis latevittatus* Big. be really a synonym of *S. æsacus*, the species also occurs in Gaboon.

SENASPIS ELLIOTI, sp. n. (Plate III. fig. 7.)

♂, ♀.—Length, ♂ (1 specimen) 15 mm., ♀ (4 specimens) 14 to 16 mm.; width of head, ♂ 5, ♀ 5.2 to 5.6 mm.; width of front at vertex in ♀ 1 mm. to just over 1 mm.; length of wing, ♂ 11.5, ♀ 12.5 to 13.5 mm.

Black; abdomen shining black, dorsum of thorax covered with light yellowish-grey pollen and thickly clothed with similarly coloured hair (in a ♀ from E. Africa the dorsum of the thorax is deeper—buff-yellow); *scutellum buff-yellow; wings deep purplish-brown from base to bottom of bend in third longitudinal vein above first posterior cell, distal extremity and hind margin more or less distinctly paler, though first posterior cell sometimes infuscated, proximal two-thirds of both basal cells and*

proximal half of anal cell usually orange-buff, discal cell and distal extremities of second basal and anal cells often with darker centres enclosing a paler area; alula hyaline, except base, which is slightly infuscated; hind tibiæ fringed with black hair on inner and outer side, fringe on inner margin especially conspicuous.

Head black, vertical and frontal triangles in ♂ and front in ♀ clothed with black hair, frontal triangle in ♂ shining, front in ♀ with a dull clove-brown transverse band above middle, elsewhere shining; face light greyish or silvery pollinose, tubercle and area immediately above it shining black; occipital region clothed with yellowish hair, with a more or less conspicuous fringe of blackish hair above in ♀; *antennæ* clove-brown or black, arista cinnamon. *Thorax*: pleuræ and pectus clothed with black hair; *scutellum* clothed with hair of same colour as that covering remainder of dorsum. *Abdomen*: dorsum clothed with minute, appressed, black hairs, sides clothed with longer black hair; dorsum of second segment with a larger or smaller dull black median area, resting on front margin, and confined to anterior third; ♂ genitalia yellowish-grey pollinose, sparsely clothed with short yellowish hairs. *Wings*: distal margin of darker area straight, forming a transverse line, majority of veins within darker area usually bordered with orange-buff. *Squamæ* buff-yellow, fringed with similarly coloured hair. *Legs* entirely black, clothed with black hair.

Hab. Ruwenzori and East Africa Protectorate: type of ♂ from Ruwenzori, 7000–8000 ft. (*G. F. Scott Elliot*); type of ♀ taken between Salt Lake and Wawamba Country, Ruwenzori district (*G. F. Scott Elliot*); other specimens from Ruwenzori, 6000–8000 ft. (*G. F. Scott Elliot*); Mubuku Valley, E. Ruwenzori, 6000–13,000 ft., 1st March; and Makumbu, East Africa Protectorate, Feb. and March (*C. S. Betton*).

I have much pleasure in associating with this fine species the name of its discoverer, Mr. G. H. Scott Elliot.

In addition to those already mentioned, the following African species also belong to the genus *Senaspis*:—*S. flaviceps* Macq. (the type of the genus), *Merodon umbrifer* Walk. (List Spec. Dipt. Ins. in Coll. Brit. Mus. iii. 1849, p. 601.—Sierra Leone: closely allied to *S. asacus* Walk.), *Dolichomerus nigritus* Big. (Madagascar), and *Plagiocera hæmorrhœa* Gerst. (Baron Carl Claus von der Decken's Reisen in Ost-Afrika, Bd. iii. Abth. i. 1869, p. 391, Taf. xvi. fig. 6.—Central and East Africa).

MEGASPIS Macq.

Megaspis Macquart, Mémoires de la Société royale des Sciences, de l'Agriculture et des Arts, de Lille, 1841, p. 87; Diptères Exotiques, t. ii. 2, 1842, p. 27.

MEGASPIS BULLIGERA, sp. n. (Plate III. fig. 8.)

♂, ♀.—Length, ♂ (5 specimens) 10·25 to 11·75 mm., ♀ (5 specimens) 8·8 to 12 mm.; width of head, ♂ 4·8 to 5·4, ♀ 3·8 to 5 mm.; width of front at vertex in ♀ 1·6 to 2 mm.; length of wing, ♂ 9 to 10, ♀ 8 to 10 mm.

General coloration of body mummy-brown, greater portion of abdomen often clove-

brown or black, second, third, and fourth abdominal segments, in middle line above, each with a conspicuous, black, rounded tubercle (that on second segment most prominent), shining in centre but dull black on margin in specimens in good condition; wings with a light brownish tinge, and with a narrow and somewhat oblique dark brown band, extending from costa, at distal extremity of mediastinal vein, to upper distal angle of second basal cell.

Head black, covered with yellowish pollen, and clothed with short hair ranging in colour from straw-yellow to light buff-yellow; front in ♀ broad, an area on vertical region surrounding ocelli, and sometimes extending forwards to middle, covered with dark brown pollen and clothed with dark brown or black hair; face with narrow shining black tubercle in middle line below depression beneath *antennæ*, which are clove-brown, second joint sometimes lighter (chestnut); *arista* ochraceous-buff, clothed on basal half with short hairs, distal extremity bare. *Thorax*: dorsum, including scutellum, thickly clothed with short tawny or raw-sienna-coloured hair, often forming a conspicuous tuft in front of base of wing on each side; *scutellum* with a dull cinnamon-rufous tinge, with an ill-defined darker transverse band near front margin. *Abdomen* clothed with short maize-yellow hair (straw-yellow on first segment, which is shining black); second segment dull cinnamon-rufous, with a broad subtriangular black mark resting on hind margin, with its apex, which does not always reach front margin, including the median tubercle, and its sides curving outwards to meet the sides of the segment about halfway between the front and hind margins; third and fourth segments mainly black, but a dull cinnamon-rufous transverse mark, with its posterior margin concave, usually visible next front margin of each segment on either side of middle line; these marks may be indistinguishable on fourth segment, hind border of which is sometimes cinnamon-rufous. *Wings*: extreme base dark brown; *alulæ* brownish at base; in certain specimens bend of third longitudinal vein into first posterior cell has a small appendix beneath. *Squamæ* dark sepia, fringes brownish. *Legs*: all tarsi ochraceous or ochraceous-rufous; femora more or less black (buff or ochraceous-buff at extreme tips, more or less ochraceous or ochraceous-rufous at base), middle femora sometimes largely ochraceous, usual patch of closely-set, minute, black bristles clearly visible at base of each femur on under side, hind femora somewhat swollen; front tibiæ cream-buff at base, which is clothed with silvery or pale yellowish hair, darker on distal half or two-thirds, where the hair is black on the outer and brown or ochraceous on the inner side; middle tibiæ cream-buff or cream-coloured at base, ochraceous-buff or even sometimes darker towards distal extremities, clothed (at least at base) with silvery or yellowish-silvery hair, which towards distal extremity usually passes into bright orange-ochraceous hair; hind tibiæ black or dark brown, cream-buff at extreme base and ochraceous or ochraceous-rufous at distal extremity, clothed on outer side at base with silvery, and elsewhere on outer side and on posterior surface with bright ochre-yellow or orange-ochraceous hair, and fringed on inner margin, except at extremities, with long black hair.

Hab. Ruwenzori and Entebbe, Uganda Protectorate; and Ashanti and Sierra Leone, W. Africa; type of ♂ from Mubuku Valley, E. Ruwenzori, 6000–13,000 ft., 17th Jan.; type of ♀ from Sierra Leone (ex *Bigot Collection, presented by Mr. G. H. Verrall*); the other specimens in the Museum collection include a ♀, taken between Salt Lake and Wawamba Country, Ruwenzori district (*G. F. Scott Elliot*); another ♀, from Entebbe, Uganda, May, “caught in laboratory” (*Captain E. D. W. Greig, I.M.S.*); 3 ♂♂ and 1 ♀ from Obuasi, Ashanti, January, June, August, and September (*Dr. W. M. Graham*); and a ♂ and ♀ from Sierra Leone (taken respectively by *Surgeon-Captain Clements* and *J. Foxcroft*).

Megaspis bulligera may at once be distinguished by the coloration of the body and wings from *Megaspis bullata* (*Eristalis bullatus*) Lw. (Öfvers. af K. Vet.-Akad. Förhandl. 1857, 381; and ‘Die Dipteren-Fauna Südafrika’s,’ 1860, [391] 319), which also has shining tubercles on the abdomen, and the type of which was taken in Caffraria: in *M. bullata* the body and the front portion of the proximal half of the wing are deep black. In the ♂ of *M. bulligera*, taken by Surgeon-Captain Clements in Sierra Leone, the light area on the second abdominal segment is of a wood-brown instead of a dull cinnamon-rufous colour, while, with the exception of the raised tubercles, the parts of the abdomen that are normally black are merely mummy-brown. The specimen selected as the type of the ♀, which, as stated above, is from the collection of the late M. Bigot, bears the following label in Bigot’s handwriting:—“*Eristalis trichopus*, ♀. *N. sp. inedit.* Quincy, Novembre 1891. M. Bigot.—Sierra Leone.” No species, however, appears to have ever been described by Bigot under the name *Eristalis trichopus*, and the specimen does not, as at first seemed probable, agree with the description of *Simoides trichopus* Bigot (Ann. Soc. Ent. Fr. lx. 1891, 373), the type of which, moreover, would appear to be from Assini.

Superfamily MUSCOIDEA, Townsend.

Family TACHINIDÆ.

Subfamily TACHININÆ.

DEJEANIA Rob.-Desv.

Dejeania Robineau-Desvoidy, Essai sur les Myodaires, 1830, p. 33.

DEJEANIA WOLLASTONII, sp. n. (Plate III. fig. 9.)

♂, ♀.—Length, ♂ (5 specimens) 11 to 12 mm., ♀ (8 specimens) 9·25 to 13 mm.; width of head, ♂ 3·25 to 3·6, ♀ 3 to 4 mm.; width of front at vertex, ♂ 1 to just over 1, ♀ 1 to 1·4 mm.; length of wing, ♂ 10 to 12, ♀ 9·6 to 12 mm.; length of portion of palpi projecting beyond epistoma 2½ to 3 mm.; length of proboscis, from bend near base to tip, 4 to 5·6 mm.

Pectus, pleuræ, lateral margins of dorsum of thorax, and legs cinnamon-rufous; dorsum of thorax black, greyish pollinose; abdomen chestnut, sometimes cinnamon-rufous, especially beneath, dorsum greyish pollinose in specimens in good condition, especially near front margins of segments, second, third, and fourth segments each with a triangular or elongate median black spot (sometimes indistinguishable or absent on one or more, or even all of the segments); all macrochaeta and spines black; wings sepia-coloured, with a dark brown area (sometimes russet-brown, or wholly or partly absent) on antero-proximal portion, extending from base to end of first longitudinal vein.

Head: face and jowls buff, whitish pollinose, frontal stripe burnt-umber-coloured or chocolate-brown, sides of front usually blackish, sometimes burnt-umber-coloured; occiput blackish, greyish pollinose; epistoma very prominent; basioccipital region clothed with long whitish hair; face on each side with an irregular row of fine black bristles, descending nearly to level of lower margin of eye; *proboscis* cinnamon-rufous, darker towards tip, long, slender, and projecting beyond *palpi*, which are ochraceous or ochraceous-buff, and also very slender, with margins of portion projecting beyond epistoma parallel, and clothed with black bristles, which are longer below, especially at distal extremity; *antennæ* cinnamon-rufous to dark chestnut or dark brown, with second and third joints usually lighter than third joint, second and third joints light greyish pollinose, third joint very much wider in ♂ than in ♀, *arista* dark brown, with second joint moderately elongate, and third joint, except distal extremity, minutely pubescent. *Thorax:* dorsum with greyish pollinose covering most distinct in front, where may be seen commencement of a pair of narrow, admedian, dark, longitudinal stripes, which disappear before reaching transverse suture; fine hair clothing dorsum between macrochaetae uniformly black; mesopleuræ whitish pollinose, with fine whitish hair at base of black bristles; *scutellum* dull chestnut. *Abdomen:* black median spots on dorsum not or scarcely reaching hind margins of segments, with their bases resting on front margins; fine hair clothing dorsum black, sometimes more or less whitish, that on sides whitish; second segment with two or three, third segment with from four to six spines on each side in front of marginal series, arranged in a more or less regular transverse row. *Wings:* veins beyond darker area sometimes bordered with darker colour. *Legs* clothed mainly with black hair and bristles, but with whitish or yellowish hair on under side of basal half of femora, and pile on under side of hind tarsi bright buff-yellow.

Hab. Ruwenzori, Uganda; and East Africa Protectorate: types of ♂ and ♀ and one other ♀ from Mubuku Valley, E. Ruwenzori, 5000–13,000 ft., 14th, 17th, and 31st Jan.; also 1 ♂, 2 ♀ ♀ from Ruwenzori, 7000–9000 ft. (*G. F. Scott Elliot*); 2 ♂ ♂, 2 ♀ ♀ from Njoro, E. Africa Protectorate (*A. J. Cholmley*); and 1 ♂ and 2 ♀ ♀ from Mombasa, E. Africa Protectorate (*A. J. Cholmley*). A specimen from the last-mentioned locality bears the label:—"Hatched in box of moth and butterfly chrysalides." I have much pleasure in naming this species in honour of Mr. A. F. R.

Wollaston, one of the members of the Ruwenzori Expedition, of which he has recently published a fascinating account*.

In spite of the variation exhibited by the series of specimens enumerated above, as regards the presence or absence—partial or complete—of the spots on the abdomen and the dark area on the anterior portion of the proximal half of the wing, it is impossible to regard the differences as anything more than individual. As regards the abdominal markings, at any rate, somewhat similar differences are exhibited by *Dejeania capensis* Rob.-Desv. (? = *Dejeania (Stomoxys) bombylans* Fabr.), a widely distributed species in Central and South Africa, which can readily be distinguished from *D. wollastonii* owing to the general chrome-yellow colour of the body, by contrast with which the black abdominal spots are much more conspicuous.

SERICOPHORMYIA †, gen. n.

Allied to Chætolyyga ‡ Rond., but distinguished by the claws and pulvilli of the ♂ not being elongate, and by the special character of the thoracic hair, or a portion thereof.—Stoutly built, thick-set flies, with densely hairy eyes, and thorax (dorsum or pleuræ, or both) thickly clothed between the macrochætæ with fine, yellowish, silky hair, often crinkled, especially on pleuræ. Face more or less hairy; scutellum semi-translucent; hind tibiæ ciliated.

Head: front moderately prominent, in ♂ of moderate width or rather narrow; vertical bristles present in both sexes; ocellar bristles directed forwards and outwards; ♂ without, ♀ with 2 orbital (fronto-orbital) bristles on each side; sides of face (parafacials of Townsend) of moderate width, or rather narrow; depth of jowls one-eighth to one-sixth or one-fifth of that of eye, lower margin of head straight; facial angles close to margin of buccal cavity, interspace not constricted; facial ridges ciliated on lower third, or to above middle; third joint of *antennæ* long, and of moderate or considerable breadth, from three to four times as long as second, penultimate joint of arista not elongate. *Thorax*: dorsum without distinct longitudinal stripes. *Abdomen*: macrochætæ marginal.

Typical species: *Tachina dasyops* Wied. (Anal. Ent. p. 42, and Aussereuropäische zweiflügelige Insekten, ii. 1830, p. 308; *Chætolyyga dasyops* Br. & v. Berg, Denkschr. der math.-naturw. Cl. der k. Akad. Wiss., Wien, 1891, p. 402); S. and E. Africa; Aden, Arabia.

* 'From Ruwenzori to the Congo. A Naturalist's Journey Across Africa.' By A. F. R. Wollaston. With Illustrations. (London: John Murray, Albemarle Street, W. 1908.)

† *σπρικόφορος*, silk-bearing (alluding to the character of the fine hair on the thorax); *μυία*, a fly.

‡ In the 'Katalog der Paläarktischen Dipteren,' Bd. iii., by Dr. M. Bezzi and P. Stein (Budapest: 1907), p. 229, this genus is reduced to the rank of a section of the genus *Winthemia* Rob.-Desv. ('Essai sur les Myodaires,' 1830, p. 173), which, however, was so briefly and imperfectly characterised by its author that it cannot fairly be regarded as having been *described* at all; I therefore see no valid reason for allowing *Chætolyyga* Rond. to be superseded.

SERICOPHOROMYIA CLARIFILOSA, sp. n. (Plate III. fig. 10.)

♂.—Length (1 specimen) 12·25 mm.; width of head 4·25 mm.; width of front at vertex 0·6 mm.; length of wing 9 mm.

Dorsum of thorax and abdomen moderately shining; dorsum of thorax (exclusive of scutellum and a median quadrate area immediately in front of it) olive, clothed with black hair and bristles; silky, crinkled hair maize-yellow, confined to pleuræ, postalar calli, hinder portion of humeral calli, and lateral margins of scutellum; sides of anterior portion of abdomen tawny ochraceous, last two segments, except basal angles, black, first segment very short and entirely black, second segment with a large median black blotch, third segment with a black median triangle; wings with a slight brownish tinge, extreme base ochreous; legs black, hind tibiæ faintly ochraceous on inner side in middle, front femora yellowish pollinose on sides and beneath, middle and hind femora greyish pollinose on anterior and posterior surfaces.

Head yellowish, front clothed with dark brown hair, upper half (or rather less) of front blackish or black, frontal stripe black, its middle portion narrower than sides of front; sides of face ("parafacials" of Townsend) narrow, frontal bristles descending to level of end of second joint of antenna, and followed by a compound series of fine blackish hair, which descends to level of point at which ciliation of facial ridges ceases, *i. e.*, to level of upper end of lowest third of facial ridges; jowls and occiput clothed with buff-yellow hair; *hairy covering of eyes* brown above, yellowish below; *palpi* stout, clavate, brown, extreme tips buff, clothed with black hairs and bristles; *antennæ*, including arista, entirely clove-brown, third joint oblong, broad, about four times as long as second, and three times as long as broad. *Thorax*: scutellum and median quadrate area in front of it honey-yellow, scutellum clothed, apart from lateral margins and macrochæte, entirely with short black hair; pectus, pleuræ, and lateral margins of dorsum olivaceous, yellowish pollinose; humeral calli buff, postalar calli dusky ochraceous-buff. *Abdomen* clothed above with short black hair, on sides and below with pale Naples yellow hair; third and fourth segments yellowish pollinose in front above, greyish pollinose below; black median blotch on dorsum of second segment in shape of a truncated triangle, with base resting on front margin, sides somewhat curved, and apex cut off by hind margin; black median triangle on dorsum of third segment with base resting on hind margin, and apex produced to meet front margin; dorsum of fourth segment with a tawny-ochraceous triangle occupying each basal angle, the apices of these triangles directed towards middle line, but widely separated; dorsum of fifth segment (at least in case of type) with only a very small and scarcely noticeable fleck in each basal angle; venter tawny ochraceous, with apex (fourth and fifth segments, except basal angles of former) black, a transversely elongate, black blotch on anterior margin of second, and a black, transverse band on posterior half of third segment. *Squamæ* wax-yellow. *Legs* clothed with black hair and bristles, but with long maize-yellow hair on under side of front and hind femora, and on under side of

basal half of middle femora; fringe of bristles (ciliation) on outer side of hind tibiæ long and regular.

Hab. Mubuku Valley, E. Ruwenzori, 5000–7000 ft., 13th Jan.

Sericophoromyia claripilosa may be distinguished from *S. dasyops* Wied. *inter alia* by the darker colour of the hairy covering of the eyes, the sides of the face being narrower and bearing blackish instead of pale yellow hair, the ciliation of the facial ridges being confined to the lower third instead of extending above the middle, the silky thoracic hair being restricted in extent as above described instead of extending over the whole thorax, including the disc of the scutellum, the upper surface of the scutellum being without short, scattered, black bristles, and by the tibiæ and tips of the middle and hind femora not being tawny.

Subfamily DEXINÆ.

DEXIA Mg.

Dexia Meigen, Systematische Beschreibung der bek. Europ. zweifl. Insekten, v., 1826, p. 33.

DEXIA INAPPENDICULATA, sp. n. (Plate III. fig. 11.)

♂.—Length (2 specimens) 11·5 to 12 mm.; width of head 2·8 mm.; width of front at vertex 0·6 mm.; greatest width of abdomen 3·4 mm.; length of wing 10·4 mm.

Rather narrow-bodied and elongate; thorax Naples yellow pollinose, dorsum marked with four interrupted and incomplete longitudinal black stripes, as in *Dexia rustica* Fabr.; *abdomen ochraceous-buff, yellowish pollinose, dorsum with a fairly broad, longitudinal, clove-brown stripe, extending from base to apex, interrupted on front margins of segments, and expanding somewhat on hind margins; wings sepia-coloured, moderately dark, bend of fourth longitudinal vein without an appendix.*

Head ochraceous-buff, yellowish pollinose, frontal stripe dark mummy-brown; bristles and hair, except yellowish hair on basi-occipital region, entirely black; facial septum well developed; *palpi* small, buff; *antennæ* ochraceous-buff. *Thorax* clothed exclusively with black hair and bristles. *Abdomen* also clothed with entirely black hair and bristles; dorsum with hind borders of all segments more or less dusky, partly owing to each macrochaeta standing on a small, circular, dark clove-brown spot; venter with median, longitudinal, clove-brown stripe, which, except on last segment or last two segments, appears double, since inner edges of scutes alone are pigmented. *Wings*: small transverse vein darker than other veins, posterior transverse and distal portion of fourth longitudinal vein slightly suffused with brown. *Squamæ* and *halteres* buff. *Legs* tawny-ochraceous, tarsi clove-brown; all legs slender and elongate, clothed with black hair and bristles, proximal third of front tibiæ distinctly narrowed.

Hab. Ruwenzori, 7000–8000 ft. (*G. F. Scott Elliot*).

In the coloration of the body *Dexia inappendiculata* presents a general resemblance to the common European *D. rustica* Fabr., from which, however, it may be

distinguished, *inter alia*, by its narrower and more elongate shape, dusky hind borders to the abdominal segments, infuscated wings, and the absence of an appendix to the bend of the fourth longitudinal vein. *Dexia lugens* Wied. (Auss. zw. Ins. ii. 1830, p. 374), the type of which is stated to be from the Cape of Good Hope, was perhaps wrongly assigned by its author to the present genus; but in any event *D. inappendiculata* must be readily distinguishable from it, since, according to the original description, the abdomen in Wiedemann's species is shimmering grey and black, with an almost chequered appearance. A ♀ *Dexia* from Natal in the Museum collection, belonging in all probability to an undescribed species, has the usual appendix to the fourth longitudinal vein.

Subfamily SARCOPHAGINÆ.

SARCOPHAGA Mg.

Sarcophaga Meigen, Systematische Beschreib. der bek. Europ. zweifl. Insekten, v., 1826, p. 14.

SARCOPHAGA NOTATIPENNIS, sp. n. (Plate III. fig. 12.)

♂.—Length (1 specimen) 12 mm.; width of head 3 mm.; width of front at vertex 0·8 mm.; greatest width of abdomen just over 3 mm.; length of wing 9·5 mm.

Olivaceous, body rather narrow and elongate; dorsum of thorax with three fairly broad, dark, longitudinal stripes; abdomen with shimmering patches of usual type, anal segments shining black; all hair and bristles on body and legs black; wings with a brownish tinge, and each wing with a large, circular, clove-brown spot surrounding small transverse vein, and three other somewhat lighter clove-brown markings.

Head black, front and face clothed with pale yellowish pollen, jowls and occiput with greyish pollen; when viewed in profile, a conspicuous, quadrate, dark patch next eye on each side, on a level with base of antennæ; frontal stripe black; upper part of sides of face with a descending row of fine hairs, lower part of sides of face with a row of four or five relatively long and stout bristles, uppermost bristle but one being particularly long; *palpi* and *antennæ* (including arista) clove-brown, third joint of antenna nearly three times as long as second. *Thorax*: four post-sutural dorso-central bristles, of which second, counting from front, is very small in case of type; dorsum in type damaged by exudation of fluid, median longitudinal stripe apparently olive; *scutellum* olive, with a lighter fleck on each basal angle. *Abdomen*: second, third, and fourth segments each with a narrow, median, dorsal, sepia-coloured triangle, its base resting on posterior and its apex extending to anterior margin; when abdomen is viewed from above, each of these triangles appears situated on a shimmering olive-grey patch of irregular outline, while on each side, in case of second and third segments, with its base resting on anterior margin and its posterior angles rounded, is a quadrate shimmering olive-grey patch, hind margin of which is not quite half-way between front and hind margins of segment; on fourth segment corresponding patches are smaller and more irregular in outline; second, third, and fourth segments each with a pair of median marginal macrochætæ on dorsum, pair on fourth segment being in centre, and

slightly in advance, of a complete transverse row of macrochaetae; anal segments clothed with fine hair; venter olive-grey pollinose, looking darker when viewed from certain directions. *Wings*: veins, except first longitudinal, end of auxiliary, distal portion of fourth longitudinal, and transverse veins or portions of longitudinal veins covered by dark spots mainly cinnamon-rufous; third longitudinal vein alone setigerous, bristles extending from point of origin of second longitudinal vein to rather less than half-way between this and small transverse vein; besides large circular spot surrounding small transverse vein, base of bent up portion of fourth longitudinal vein, from angle to point where vein is bent outwards, and posterior transverse vein are also clouded with clove-brown (in case of posterior transverse vein colour is darker at each end of the streak); a fourth dark fleck is situate at distal extremity of basal fourth of wing, lying in first basal cell immediately above transverse vein forming proximal boundary of discal cell, and also extending into base of discal cell itself. *Squamæ* whitish, central portion with a light brownish tinge. *Legs* black, femora more or less dark greyish pollinose, under side of hind femora and inner side of hind tibiae thickly fringed with long and fine hair.

Hab. Mubuku Valley, E. Ruwenzori, 5000–7000 ft., 13th Jan.

The conspicuous wing-markings of *Sarcophaga notatipennis* at once distinguish it from any of its African congeners at present known, since *Sarcophaga spilogaster* Wied. (Anal. Ent. p. 50, & Auss. zweifl. Ins. ii. 1830, p. 362.—Cape of Good Hope) and *S. octomaculata* Jaenn. (Abhandl. der Senckenb. Gesellsch. Bd. vi., 1867, p. 379.—Massowah), both of which have similarly spotted wings, belong to the genus *Angiometopa* Br. & von Berg., owing to the fact that in them the abdomen bears fixed black spots, in addition to the usual shimmering chequered pattern, though the latter, in the case of *A. spilogaster*, at any rate, is much reduced.

SARCOPHAGA INEQUALIS, sp. n. (Plate III. fig. 13.)

♂.—Length (1 specimen) 10·5 mm.; width of head 3·25 mm.; width of front at vertex 1 mm.; length of wing 8·8 mm.

Grey, with shimmering patches on abdomen; dorsum of thorax with three broad clove-brown longitudinal stripes, extending from front to hind margin, and a shorter stripe on each side; when viewed from above, second, third, and fourth abdominal segments each exhibit a dark (clove-brown), quadrate, median area, occupying whole length of segment, and flanked on each side by a shimmering grey patch; median dark area on fourth segment narrower than that on third, which is narrower than that on second; posterior angles of median areas each produced outwards into a dark blotch, which has a greyish-olivaceous sheen when viewed from certain directions; first anal segment clove-brown, greyish pollinose, second anal segment ferruginous; all hair and bristles on body and legs black; wings hyaline, without spots; bristles on sides of face fine, rather numerous, and not arranged in a single row.

Head blackish, front, face, jowls, and posterior orbits bright straw-yellow pollinose,

occiput greyish pollinose, clothed, like basi-occipital region, with pale yellow hair; anterior margin of buccal cavity cream-buff; *palpi* dark brown, indistinctly russet towards base; *antennæ* clove-brown, with a greyish sheen, third joint about two and a half times as long as second, arista with a distinct pale band. *Thorax*: four post-sutural dorso-central bristles, the foremost small; median dorsal stripe continued on to scutellum, and extending nearly to hind margin of latter. *Abdomen*: when dorsum of second, third, and fourth segments is viewed at a low angle from behind it appears shimmering grey, with a clove-brown median longitudinal stripe and a similarly coloured pair of admedian longitudinal stripes, or elongate blotches, on each segment, the admedian stripes on each successive segment being further from the lateral margins; a pair of median marginal macrochætæ only on third and fourth segments; fine hair on anal segments really clove-brown rather than black, when viewed from side. *Wings*: bristles confined to base of third longitudinal vein. *Squamæ* waxen white, central portion with a slight brownish tinge. *Legs* black, inner side of middle and hind tibiæ tinged with chestnut, femora more or less greyish pollinose, under side of hind femora and inner side of hind tibiæ thickly fringed with long and fine hair.

Hab. Ruwenzori, 6000–8000 ft. (*G. F. Scott Elliot*).

The fineness of the bristles on the sides of the face, and the fact that they are not arranged in a single row but, especially below, form an irregular cluster, will help to distinguish this species.

Family MUSCIDÆ.

Subfamily GLOSSININÆ.

GLOSSINA Wied.

Glossina Wiedemann, *Aussereuropäische zweiflügelige Insekten*, ii., 1830, p. 253.

GLOSSINA FUSCA Walk.

Stomoxys fuscus Walker, *List Dipt. Ins. in Coll. Brit. Mus.* pt. iii. 1849, p. 682.

Glossina fusca Austen, 'A Monograph of the Tsetse-Flies,' 1903, p. 95, pl. vi. (*q. v.* for additional synonymy).

1 ♂.—In forest between Irumu and Avakubi, E. Congo Free State, alt. 2000 ft., Oct.

NOTE.—We have recently received a separate copy of the following paper:—"Notes on a Collection of SIPHONAPTERA from Ruwenzori, Uganda," by the Hon. N. Charles Rothschild, M.A., F.L.S., F.E.S., published in the 'Entomologist's Monthly Magazine,' (2) xix, pp. 76–79, pl. i. (1908).

This paper was unfortunately received too late to be incorporated in the body of this work. It contains descriptions of the following five species, the first four being new:—

- | | |
|---|--|
| 1. <i>Ctenocephalus wollastoni</i> Roths. | 4. <i>Ctenopsyllus hirsutus</i> Roths. |
| 2. <i>Pygiopsylla torvus</i> Roths. | 5. ,, <i>athiopius</i> Roths. |
| 3. <i>Ceratophyllus stygius</i> Roths. | |

PLATE III.

PLATE III.

(All figures about twice natural size.)

- Fig. 1. *Tabanus ruwenzorii* Ricardo, p. 86.
2. *Proagonistes prædo* Austen, p. 87.
3. *Syrphus adligatus* Wied., p. 88.
4. *Asarcina amœna* Austen, p. 88.
5. „ *punctifrons* Austen, p. 89.
6. *Senaspis æsacus* Walk., p. 90.
7. „ *elliottii* Austen, p. 90.
8. *Megaspis bulligera* Austen, p. 91.
9. *Dejeania wollastonii* Austen, p. 93.
10. *Sericophoromyia claripilosa* Austen, p. 96.
11. *Dexia inappendiculata* Austen, p. 97.
12. *Sarcophaga notatipennis* Austen, p. 98.
13. „ *inæqualis* Austen, p. 99.

